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Applicant(s)	: **Schaffer et al.**
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Examiner	: **Huynh, Son P.**
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By: 

Title: **THREE-WAY MEDIA RECOMMENDATION METHOD AND SYSTEM**

Mail Stop: **APPEAL BRIEF - PATENTS**
Commissioner for Patents
Alexandria, VA 22313-1450

REVISED APPEAL UNDER 37 CFR 41.37

Sir:

In response to the Notification of Non-Compliant Appeal Brief dated 22 April 2005, enclosed is a revised appeal from the decision of the Examiner dated 9 July 2004, finally rejecting claims 1-26 of the subject application. The fee for this appeal was submitted with the original appeal, which was submitted on 2 December 2004.

The Notification of Non-Compliant Appeal Brief asserts that the brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings, if any, by reference characters. However, the Examiner fails to provide a basis for this assertion. The original brief contained a Summary of Claimed Subject Matter wherein each independent claim was presented with specific reference to the page and line numbers of the specification, and/or the reference characters of the drawings, at which each claimed element can be found. Absent any indication as to where this Summary is deficient, this same Summary of Claimed Subject Matter is included in this revised appeal. If this Summary is again deemed deficient, the applicants respectfully request that the Examiner identify which independent claim is not

defined with reference to the specification by page and line number, and/or by reference numeral, so that the applicants can adequately address such a deficiency.

The Notification of Non-Compliant Appeal Brief noted that the brief did not contain an Evidence Appendix. The applicants respectfully note that the applicants do not rely on evidence submitted under 37 CFR 1.130, 1.131, or 1.132 or of any other evidence entered by the examiner, and thus there is no requirement for submission of an Evidence Appendix, as asserted in the Notification of Non-Compliant Appeal Brief.

The Notification of Non-Compliant Appeal Brief noted that the brief did not contain a Related Proceedings Appendix. The Related Appeals and Interferences section of the brief clearly states that the applicants are not aware of any co-pending appeal or interference which will directly affect or be directly affected by or have any bearing on the Board's decision in the pending appeal, and thus there have been no decisions rendered by a court or the Board that require the submission of a Related Proceedings Appendix, as asserted in the Notification of Non-Compliant Appeal Brief.

The Notification of Non-Compliant Appeal Brief requires that the applicants' heading of "ISSUES TO BE REVIEWED ON APPEAL" be changed to "GROUND OF REJECTION TO BE REVIEWED ON APPEAL", and that the applicants' title for the "APPENDIX" of "CLAIMS ON APPEAL" be changed to "CLAIMS APPENDIX". The applicants respectfully note that 37 CFR 41.37(c)(1) mandates "appropriate headings", and does not require that the headings literally correspond to those used in 37 CFR 41.37(c)(1), as required by the Examiner. However, in the interest of advancing prosecution of this case, the headings have been correspondingly changed to conform to the Examiner's demand.

This paper includes (each beginning on a separate sheet):

1. **Revised Appeal Brief;**
2. **Claims Appendix.**

APPEAL BRIEF

I. REAL PARTY IN INTEREST

The above-identified application is assigned, in its entirety, to **Philips Electronics North America Corporation.**

II. RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any co-pending appeal or interference which will directly affect or be directly affected by or have any bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 27-29 are canceled.

Claims 1-26 are pending in the application.

Claims 18-23 stand rejected by the Examiner under 35 U.S.C. 112, second paragraph.

Claims 1-4, 6, 9-12, and 14 stand rejected by the Examiner under 35 U.S.C. 102(e).

Claims 5, 7-8, 13, and 15-26 stand rejected by the Examiner under 35 U.S.C. 103(a).

These rejected claims, 1-26, are the subject of this appeal.

IV. STATUS OF AMENDMENTS

An amendment was filed subsequent to the final rejection in the Office Action dated 9 July 2004, in response to a rejection under 35 U.S.C. 112, second paragraph, but not admitted.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention includes methods and systems for providing recommendations based on at least two sets of predictions that are based on at least two sets of profile data.

Predictions of material that a user is likely to prefer are typically based on profile data derived from explicit and implicit user preferences. Explicit user preferences include, for example, a user's response to a questionnaire (page 7, lines 16-23; also FIG. 7); implicit user preferences include, for example, determined preferences based on the user's viewing habits

(page 3, line 22 – page 7, line 15; also FIG. 6). Alternatively, a mix of preferences and viewing can be used, wherein a user explicitly ranks shows that the user has viewed (page 7, line 24 – page 9, line 7; also FIG. 5).

Conventional recommendation systems use the user's expressed preferences as a baseline of a user profile, then modify the profile over time, based on the derived implied preferences. This merging of the explicit and implicit preference information, however, has the effect of diminishing the effect of the explicit preferences over time. Alternatively, separate profiles are maintained, and weight-averaged to generate a set of predictions, similar to the illustrated weight and sum block 370 of the applicants' FIG. 8, which uses two sets of profiles 325, 330, to generate a single set of predictions 335.

This invention generates at least two sets of predictions (335 and 342 in FIG. 8), and weight-averages the predictions (335, 342), to form a combined set of predictions (340; detailed at page 21, lines 8-13). Each of the predictions (335, 342) may be based on one profile (315), or a combination of profiles (325, 330). By generating two distinct sets of predictions (335, 342), the predictions formed from one or more sets of profiles can stand alone, or can be used to modify the predictions from other sets of profiles, based on the weights assigned to each set of predictions (page 10, lines 12-14). Additionally, rules can be defined for choosing one or the other set of predictions when the different profiles produce highly disparate predictions (page 21, lines 14-20). These advantages cannot be achieved by a system that creates and uses a single set of predictions.

As claimed in independent claim 1, the invention comprises an automated recommendation system, comprising:

a processor (240 of FIG. 4) connected to receive resource data (235 of FIG. 4) defining available resources and at least two sets of profile data (315, 325, 330 of FIG. 8 and page 20, line 17 – page 21, line 1), each defining user preferences with respect to the resources;

each of the sets of profile data being derived from a different class of interaction of the user with a first portion of the resource data and usable to predict a given resource's desirability based on each of the sets (FIGs. 5, 6, 7, and page 16, line 1-page 20, line 8);

the processor being adapted to:

generate (page 20, line 9 – page 21, line 1) at least two sets of predictions (335, 342 of FIG. 8) based on one (360 of FIG. 8) or a combination (370 of FIG. 8) of the sets of profile data (315, 325, 330 of FIG. 8), and

combine the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions (page 21, lines 4-13).

As claimed in independent claim 9, the invention comprises a method of recommending resources, comprising:

generating (page 16, line 1-page 20, line 8) at least two sets of profile data (315, 325, 330 of FIG. 8) based on expressed preferences of a user with respect to the resources each being usable to predict a given resource's desirability based on each of the sets;

generating (page 20, line 9 – page 21, line 1) at least two sets of predictions (335, 342 of FIG. 8) based on one (315 of FIG. 8) or a combination (235+330, via 370 of FIG. 8) of the sets of profile data; and

combining the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions (page 21, lines 4-13).

As claimed in independent claim 18, the invention comprises an automated recommendation system, comprising:

a processor (240 of FIG. 4) connected to receive resource data defining available resources (235 of FIG. 4) and sets of profile data (315, 325, 330 of FIG. 8), each defining user preferences with respect to the resources;

the sets of profile data including

a set of explicit profile data (315) indicating express indications by a user of preferred classes of programming rather than indications by the user of particular resources that are preferred;

the sets of profile data further including

feedback data set (325) derived from ratings provided by the user with respect to a particular resource in the resource data; and

the sets of profile data further including

an implicit data set (330) derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selection;

the processor being adapted to generate at least two sets of predictions (335, 342 of FIG. 8) based on one or a combination of the sets of profile data, each of the predictions including a confidence level (page 21, lines 4-8);

the processor being further adapted to combine the predictions by weight-averaging corresponding ones from each of the at least two sets (page 21, lines 8-13).

As claimed in independent claim 21, the invention comprises a method of automatically recommending resources, comprising :

receiving resource data defining available resources and sets of profile data (315, 325, 330 of FIG. 8), each defining user preferences with respect to the resources;

the sets of profile data including

a set of explicit profile data (315) indicating express indications by a user of preferred classes of programming rather than indications by the user of particular resources that are preferred;

the sets of profile data further including

feedback data set (325) derived from ratings provided by the user with respect to a particular resource in the resource data; and

the sets of profile data further including

an implicit data set (330) derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selection;

generating (page 20, line 9 – page 21, line 1) at least two sets of predictions (335, 342 of FIG. 8) based on one (315) or a combination of the sets (325+330, via 370 of FIG. 8) of profile data, each of the predictions including a confidence level (page 21, lines 4-8);

combining (page 21, lines 8-13) the predictions by weight-averaging corresponding ones from each of the at least two sets to produce a combined set (340 of FIG. 8).

As claimed in independent claim 24, the invention comprises a method of combining profile data, comprising :

generating first profile data by receiving through a user interface user preferences in the form of expressed generalized preferences corresponding classes of resources (FIG. 7, page 7, lines 16-23);

generating second profile data by receiving user preferences in the form of rating data corresponding to specific resources (FIG. 5, page 7, line 24 – page 9, line 7);

applying the first and second profile data to respective prediction engines (360, 365 of FIG. 8) and combining (375 of FIG. 8) respective results thereof (375 of FIG. 8).

Note that although FIG. 8 is used above as an example embodiment of the elements of the claims, and in the subsequent arguments, the claims are not limited to this example. FIGs. 9 and 10 illustrate other example embodiments, and other embodiments would be evident to one of ordinary skill in the art in view of the disclosure of this invention.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-2, 6, 9-10, and 14 stand rejected under 35 U.S.C. 102(e) over Tuzhilin (USP 6,236,978).

Claims 1-4, 6, 9-12, and 14 stand rejected under 35 U.S.C. 102(e) over Hendricks et al. (USP 6,408,437, hereinafter Hendricks).

Claims 5, 7-8, 13, and 15-26 stand rejected under 35 U.S.C. 103(a) over Hendricks and Bergh (USP 6,112,186).

Claims 18-23 stand rejected under 35 U.S.C. 112, second paragraph.

VII. ARGUMENT

Rejection under 35 U.S.C. 102(e) over Tuzhilin

Claims 1-2 and 6

Claim 1, upon which claims 2 and 6 depend, claims an automated recommendation system, comprising a processor that generates at least two sets of predictions (335, 342) based on one or a combination of sets of profile data (315, 325, 330), and combines (375) the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions.

Tuzhilin does not teach combining predictions by weight-averaging corresponding ones from each of at least two sets of predictions.

The Examiner asserts that Tuzhilin teaches the generation of at least two sets of predictions, because Tuzhilin teaches, for example, the generation of predictions for diapers and beer (Advisory action, page 2, paragraph 4). The Examiner asserts that Tuzhilin teaches the weight averaging of these predictions, but fails to provide a reference in Tuzhilin for such a teaching.

The applicants respectfully maintain that Tuzhilin does not teach "weight-averaging corresponding ones from each of the at least two sets of predictions", as specifically claimed. In the example cited by the Examiner, the applicants respectfully maintain that a prediction for a diaper does not "correspond" to a prediction for a beer, and further maintain that a weight-average of non-corresponding predictions, such as predictions for diapers and beer, will produce meaningless results.

Claims 9-10 and 14

Claim 9, upon which claims 10 and 14 depend, claims a method of recommending resources, comprising generating at least two sets of predictions (335, 342) based on one or a combination of sets of profile data (315, 325, 330); and combining the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions (375).

As noted above, Tuzhilin does not teach combining predictions by weight-averaging corresponding ones from each of at least two sets of predictions.

The Examiner asserts that Tuzhilin teaches the generation of at least two sets of predictions, because Tuzhilin teaches, for example, the generation of predictions for diapers and beer (Advisory action, page 2, paragraph 4). The Examiner asserts that Tuzhilin teaches the weight-averaging of these predictions, but fails to provide a reference in Tuzhilin for such a teaching.

The applicants respectfully maintain that Tuzhilin does not teach "weight-averaging corresponding ones from each of the at least two sets of predictions", as specifically claimed. In the example cited by the Examiner, the applicants respectfully maintain that a prediction for a diaper does not "correspond" to a prediction for a beer, and further maintain that a weight-average of non-corresponding predictions, such as predictions for diapers and beer, will produce meaningless results.

Rejection under 35 U.S.C. 102(e) over Hendricks.

Claims 1-4 and 6

Claim 1, upon which claims 2-4 and 6 depend, claims an automated recommendation system, comprising a processor that generates at least two sets of predictions (335, 342) based on one or a combination of sets of profile data (315, 325, 330), and combines the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions (375).

Hendricks does not teach combining predictions by weight-averaging corresponding ones from each of at least two sets of predictions.

Hendricks specifically teaches the conventional generation of one set of predictions (selections 1174 in FIG. 11e), based on a weighted-average of multiple sets of criteria (FIGs. 11a-11d). As acknowledged by the Examiner, Hendricks assigns weights to "various indicators which assist in determining what channel or program the viewer desired" (Advisory action, page 2, paragraph 5).

The Examiner asserts that Hendricks generates two sets of predictions based on the different methods of combining the criteria, but the cited text of Hendricks to support his assertion (column 31, line 15 – column 32, line 64) does not reference multiple sets of predictions. As specifically taught in this referenced text, the user selects various criteria

(FIGs. 11a-11d), and then selects the "go" and "view" options to see the set of predicted programs based on these criteria (Hendricks, column 32, line 52 – column 33, line 3).

Hendricks does not teach generating multiple sets of predictions and specifically does not teach a processor that generates a combined set of predictions by weight-averaging corresponding ones from each of at least two sets of predictions, as specifically claimed by the applicants.

Claims 9-12 and 14

Claim 9, upon which claims 10-12 and 14 depend, claims a method of recommending resources, comprising generating at least two sets of predictions (335, 342) based on one or a combination of sets of profile data (315, 325, 330); and combining the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions (375).

As noted above, Hendricks does not teach combining predictions by weight-averaging corresponding ones from each of at least two sets of predictions.

Hendricks specifically teaches the conventional generation of one set of predictions (selections 1174 in FIG. 11e), based on a weighted-average of multiple sets of criteria (FIGs. 11a-11d). As acknowledged by the Examiner, Hendricks assigns weights to "various indicators which assist in determining what channel or program the viewer desired" (Advisory action, page 2, paragraph 5).

The Examiner asserts that Hendricks generates two sets of predictions based on the different methods of combining the criteria, but the cited text of Hendricks to support his assertion (column 31, line 15 – column 32, line 64) does not reference multiple sets of predictions. As specifically taught in this referenced text, the user selects various criteria (FIGs. 11a-11d), and then selects the "go" and "view" options to see the set of predicted programs based on these criteria (Hendricks, column 32, line 52 – column 33, line 3).

Hendricks does not teach generating multiple sets of predictions and specifically does not teach combining predictions by weight-averaging corresponding ones from each of at least two sets of predictions, as specifically claimed by the applicants.

Rejection under 35 U.S.C. 103(a) over Hendricks and Bergh.

Claims 5 and 7-8

Claim 1, upon which claims 5 and 7-8 depend, claims an automated recommendation system, comprising a processor that generates at least two sets of predictions (335, 342) based on one or a combination of sets of profile data (315, 325, 330), and combines the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions (375).

As noted above, Hendricks teaches the generation of a single set of predictions based on multiple criteria.

Bergh teaches generating a set of predictions based on different users' ratings of items. Bergh does not teach generating at least two sets of predictions and weight-averaging corresponding predictions from each of the at least two sets.

Neither Hendricks nor Bergh, individually or collectively, teach or suggest a processor that generates at least two sets of predictions based on one or a combination of sets of profile data, and combines the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions, as specifically claimed by the applicants.

Claims 13 and 15-17

Claim 9, upon which claims 13 and 15-17 depend, claims a method of recommending resources, comprising generating at least two sets of predictions (335, 342) based on one or a combination of sets of profile data (315, 325, 330); and combining the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions (375).

As noted above, Hendricks teaches the generation of a single set of predictions based on multiple criteria, and Bergh teaches generating a set of predictions based on different users' ratings of items.

Neither Hendricks nor Bergh, individually or collectively, teach or suggest generating at least two sets of predictions based on one or a combination of sets of profile data; and combining the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions, as specifically claimed by the applicants.

Claims 18-20

Claim 18, upon which claims 19-20 depend, claims an automated recommendation system, comprising a processor that generates at least two sets of predictions (335, 342) based on one or a combination of sets of profile data (315, 325, 330), and combines the predictions by weight-averaging corresponding ones from each of the at least two sets (375).

As noted above, Hendricks teaches the generation of a single set of predictions based on multiple criteria, and Bergh teaches generating a set of predictions based on different users' ratings of items.

Neither Hendricks nor Bergh, individually or collectively, teach or suggest a processor that generates at least two sets of predictions based on one or a combination of sets of profile data, and combines the predictions by weight-averaging corresponding ones from each of the at least two sets, as specifically claimed by the applicants.

Claims 21-23

Claim 21, upon which claims 22-23 depend, claims a method of automatically recommending resources, comprising generating at least two sets of predictions (335, 342) based on one or a combination of sets of profile data (315, 325, 330), and combining (375) the predictions by weight-averaging corresponding ones from each of the at least two sets to produce a combined set (340).

As noted above, Hendricks teaches the generation of a single set of predictions based on multiple criteria, and Bergh teaches generating a set of predictions based on different users' ratings of items.

Neither Hendricks nor Bergh, individually or collectively, teach or suggest generating at least two sets of predictions based on one or a combination of sets of profile data, and combining the predictions by weight-averaging corresponding ones from each of the at least two sets to produce a combined set, as specifically claimed by the applicants.

Claims 24-26

Claim 24, upon which claims 25-26 depend, claims a method of combining profile data (315, 325), comprising applying first and second profile data to respective prediction engines and combining respective results thereof (375).

As noted above, Hendricks teaches the generation of a single set of predictions based on multiple criteria, and Bergh teaches generating a set of predictions based on different users' ratings of items. Because neither Hendricks nor Bergh teach or suggest the generation of multiple sets of predictions, Hendricks and Bergh cannot be said to apply first and second profile data to *respective* prediction engines, and combining the respective results (plural).

Neither Hendricks nor Bergh, individually or collectively, teach or suggest applying first and second profile data to respective prediction engines and combining respective results thereof, as specifically claimed by the applicants.

Rejection under 35 U.S.C. 112, second paragraph.

Claims 18-20

Claim 18, upon which each of claims 19-20 depend, claims an automated recommendation system, that comprises a processor that generates at least two sets of predictions (335, 342) based on one or a combination of sets of profile data (315, 325, 330), and combining the predictions by weight-averaging corresponding ones from each of the at least two sets (375).

The Examiner asserts that the term "at least two sets" is unclear. The applicants note that the clause within which the term appears specifically recites that the processor is configured to "***combine the predictions*** by weight-averaging ***corresponding ones*** from each ***of the at least two sets.***" The applicants respectfully note that there is only one way to parse this clause meaningfully, and the plain meaning of the term is the "at least two sets *of predictions*", because the clause specifically refers to combining *the predictions*. That is, combining any of the other sets in the claim would not effect the claimed combining of the predictions.

The applicants further note that, in the interest of advancing prosecution in this case, the applicants offered to amend claim 18 to read "the at least two sets *of predictions*", but this amendment was not admitted.

Claims 21-23

Claim 21, upon which each of claims 22-23 depends, claims a method of automatically recommending resources, comprising generating at least two sets of predictions (335, 342) based on one or a combination of sets of profile data (315, 325, 330), and combining the predictions by weight-averaging corresponding ones from each of the at least two sets (375) to produce a combined set (340).

The Examiner asserts that the term "at least two sets" is unclear. The applicants note that the clause within which the term appears specifically recites "***combining the predictions*** by weight-averaging ***corresponding ones*** from each ***of the at least two sets*** to produce a combined set." The applicants respectfully note that there is only one way to parse this clause meaningfully, and the plain meaning of the term is the "at least two sets *of predictions*", because the clause specifically refers to combining *the predictions* to produce a combined set. That is, combining any of the other sets in the claim would not effect the claimed combining of the predictions.

The applicants further note that, in the interest of advancing prosecution in this case, the applicants offered to amend claim 21 to read "the at least two sets *of predictions*", but this amendment was not admitted.

CONCLUSIONS

Because Tuzhilin does not teach forming the weighted average of two sets of predictions, as specifically claimed, the applicants respectfully request that the Examiner's rejection of claims 1-2, 6, 9-10, and 14 under 35 U.S.C. 102(e) over Tuzhilin be reversed by the Board, and the claims be allowed to pass to issue.

Because Hendricks does not teach forming the weighted average of two sets of predictions, as specifically claimed, the applicants respectfully request that the Examiner's rejection of claims 1-4, 6, 9-12, and 14 under 35 U.S.C. 102(e) over Hendricks be reversed by the Board, and the claims be allowed to pass to issue.

Because neither Hendricks nor Bergh, individually or collectively, teach or suggest forming the weighted average of two sets of predictions, as specifically claimed, the applicants respectfully request that the Examiner's rejection of claims 5, 7-8, 13, and 15-23 under 35 U.S.C. 103(a) over Hendricks and Bergh be reversed by the Board, and the claims be allowed to pass to issue.

Because neither Hendricks nor Bergh, individually or collectively, teach or suggest applying first and second profile data to respective prediction engines and combining respective results thereof, as specifically claimed by the applicants, the applicants respectfully request that the Examiner's rejection of claims 24-26 under 35 U.S.C. 103(a) over Hendricks and Bergh be reversed by the Board, and the claims be allowed to pass to issue.

Because claims 18-23 specifically claim and particularly point out the subject matter that the applicants regard as the invention, the applicants respectfully request that the Examiner's rejection of claims 18-23 under 35 U.S.C. 112, second paragraph, be reversed by the Board, and the claims be allowed to pass to issue.

Respectfully submitted,

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804-493-0707

CLAIMS APPENDIX

1. An automated recommendation system, comprising:

a processor connected to receive resource data defining available resources and at least two sets of profile data, each defining user preferences with respect to the resources;

each of the sets of profile data being derived from a different class of interaction of the user with a first portion of the resource data and usable to predict a given resource's desirability based on each of the sets;

the processor being adapted to:

generate at least two sets of predictions based on one or a combination of the sets of profile data, and

combine the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions.

2. A system as in claim 1, wherein

the processor is further adapted to:

generate a weighted sum of corresponding records from each of the sets of profile data to generate a single combined set of profile data

generate at least one of the sets of predictions from the single combined set.

3. A system as in claim 2, wherein

the processor is connected to control a delivery of resources corresponding to the resource data and responsively to the predictions.

4. A system as in claim 1, wherein

the processor is connected to control a delivery of resources corresponding to the resource data and responsively to the predictions.

5. A system as in claim 1, wherein

the at least two profile data sets include

a feedback data set derived from ratings provided by the user with respect to a particular resource in the resource data.

6. A system as in claim 1, wherein

the at least two profile data sets include

an implicit data set derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selections of resources to use.

7. A system as in claim 1, wherein

at least one set of the at least two profile data sets comprises input vectors, and the input vectors each include feature-value pairs.

8. A system as in claim 1, wherein

at least one set of the at least two profile data sets comprises input vectors, and the input vectors include feature-value pairs and a rating value.

9. A method of recommending resources, comprising :

generating at least two sets of profile data based on expressed preferences of a user with respect to the resources each being usable to predict a given resource's desirability based on each of the sets;

generating at least two sets of predictions based on one or a combination of the sets of profile data; and

combining the predictions by weight-averaging corresponding ones from each of the at least two sets of predictions.

10. A method as in claim 9, further comprising:

generating a weighted sum of corresponding records from each of the sets of profile data to generate a single combined set of profile data; and

generating at least one of the sets of predictions from the single combined set.

11. A method as in claim 10, further comprising

controlling a delivery of resources corresponding to the resource data responsively to the predictions.

12. A method as in claim 9, further comprising

controlling a delivery of resources corresponding to the resource data responsively to the predictions.

13. A method as in claim 9, wherein

generating the at least two sets of profile data includes

generating a feedback data set by accepting ratings from a user with respect to a particular resource in the resource data.

14. A method as in claim 9, wherein

generating the at least two sets of profile data includes

generating an implicit data set by observing a user's resource use history, whereby the implicit data reflects the user's selections of resources to use.

15. A method as in claim 9, wherein

at least one set of the at least two sets of profile data comprises input vectors, and the input vectors each include feature-value pairs.

16. A method as in claim 9, wherein

at least one set of the at least two sets of profile data comprises input vectors, and generating the at least two sets of profile data includes generating feature-value pairs and a rating value.

17. A method as in claim 9, wherein:

the sets of profile data includes

a set of explicit profile data indicating express indications by a user of preferred classes of programming rather than indications by the user of particular resources that are preferred;

the sets of profile data further include

feedback data set derived from ratings provided by the user with respect to a particular resource in the resource data; and

the sets of profile data further include

an implicit data set derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selection.

18. An automated recommendation system, comprising:

a processor connected to receive resource data defining available resources and sets of profile data, each defining user preferences with respect to the resources;

the sets of profile data including

a set of explicit profile data indicating express indications by a user of preferred classes of programming rather than indications by the user of particular resources that are preferred;

the sets of profile data further including

feedback data set derived from ratings provided by the user with respect to a particular resource in the resource data; and

the sets of profile data further including

an implicit data set derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selection;

the processor being adapted to generate at least two sets of predictions based on one or a combination of the sets of profile data, each of the predictions including a confidence level;

the processor being further adapted to combine the predictions by weight-averaging corresponding ones from each of the at least two sets.

19. A system as in claim 18, wherein

the processor is further adapted to adjust weights of the weight averaging responsively to a difference between the corresponding ones.

20. A system as in claim 18, wherein

the processor is further adapted to selectively override the weight averaging responsively to a difference between the corresponding ones.

21. A method of automatically recommending resources, comprising :

receiving resource data defining available resources and sets of profile data, each defining user preferences with respect to the resources;

the sets of profile data including

a set of explicit profile data indicating express indications by a user of preferred classes of programming rather than indications by the user of particular resources that are preferred;

the sets of profile data further including

feedback data set derived from ratings provided by the user with respect to a particular resource in the resource data; and

the sets of profile data further including

an implicit data set derived from machine-observation of a user's resource use history, whereby the implicit data reflects the user's selection;

generating at least two sets of predictions based on one or a combination of the sets of profile data, each of the predictions including a confidence level;

combining the predictions by weight-averaging corresponding ones from each of the at least two sets to produce a combined set.

22. A method in claim 21, wherein

combining the predictions includes

adjusting weights of the weight averaging responsively to a difference between the corresponding ones.

23. A method as in claim 21, wherein

combining the predictions includes

selectively overriding the weight averaging responsively to a difference between the corresponding ones such that a prediction of a one of the sets of predictions is included in the combined set and a prediction of the other of the sets of predictions is excluded.

24. A method of combining profile data, comprising :

generating first profile data by receiving through a user interface user preferences in the form of expressed generalized preferences corresponding classes of resources;

generating second profile data by receiving user preferences in the form of rating data corresponding to specific resources;

applying the first and second profile data to respective prediction engines and combining respective results thereof.

25. A method as in claim 24, further including:

combining the first and second profile data,

wherein

combining the first and second profiles includes weight averaging corresponding ones of the profile data.

26. A method as in claim 24, wherein

combining respective results includes selectively weight averaging corresponding ones of the predictions.